

## FABRIC HINGE

### CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application is a Divisional Application of U.S. patent application Ser. No. 15/878,989 titled “SMALL TABLE FRAME”, which was filed on Jan. 24, 2018 and which claims priority from U.S. Provisional Patent Application No. 62/449,818 filed on Jan. 24, 2017 and titled “OUTDOOR EQUIPMENT 2016”, both of which are incorporated fully herein by reference.

### TECHNICAL FIELD

[0002] The present invention relates to foldable hinges useful for foldably connecting together various items and objects.

### BACKGROUND INFORMATION

[0003] A large portion of the population enjoy camping and other outdoor activities. When engaged in these activities, however, many people enjoy some of the comforts of home. This includes a table or other surface which can be used to prepare food, serve food or on which to place various objects including cook stoves and the like for use during outdoor activities.

[0004] Although individuals engaged in the activities enjoy such comforts of home, weight, space and collapsibility is still an important feature. If the table or other foldable object is structure is not able to be folded and stored in a small area and if it is too heavy, its usefulness will be lost to campers and outdoor enthusiasts.

[0005] Accordingly, what is needed is a foldable light-weight hinge mechanism which allows a table or other object to be folded for purposes of packing it to the outdoor area but which can be folded to form a multipurpose, useful object such as a table.

[0006] Furthermore, what is needed is a hinge, which unlike conventional hinges such as butt, barrel, piano, butterfly and others, does not protrude above the surface of the unfolded or folded object. In other words, if a table surface is to be made of hinged panels, the ideal design would not have hinges interrupting the smooth surface of the table or extending its packed dimensions. Such protruding hinges could tip wine glasses when in use as a table, or snag on fabric when stored in a transport case.

### SUMMARY

[0007] The present disclosure features a foldable metal and fabric hinge. In accordance with an embodiment of the present invention, the foldable fabric hinge comprises a fabric portion having a first end and a second end. The foldable fabric hinge further comprises first and second fabric portion holders, wherein each the first and second fabric portion holders is configured for gripping a respective one of the first and second fabric portion ends. A plurality of fasteners are configured for facilitating assembly of the first and second fabric portion holders and the fabric portion to first and second components requiring a hingeable connection.

[0008] In one embodiment, each of the first and second fabric portion holders comprises a top piece and a bottom piece, wherein first and second ends of the fabric portion are configured to be disposed between the top and bottom piece

of each of the respective first and second fabric portion holders. The top piece and the bottom piece are interlocking with one another.

[0009] In another embodiment, one of the top piece and the bottom piece of each of the first and second fabric portion holders includes a plurality of depressions, and the other of the top piece and the bottom piece includes a plurality of ridges, wherein the plurality of ridges have a configuration complementary to that of the plurality of depressions and located and configured to mate with the plurality of depressions.

[0010] Furthermore, one of the top piece and the bottom piece of each of the first and second fabric portion holders may include at least one protrusion, and the other one of the top piece and the bottom piece includes at least one hole located and configured to mate with the at least one protrusion.

[0011] In a further embodiment, the fabric portion includes at least one hole. The at least one protrusion and the at least one hole on the top and bottom pieces of at least one of the first and second fabric portion holders align with the at least one hole on the fabric portion in an assembled configuration thereof. Each of the first and second fabric portion holders are flush mount fitted onto the first and second components requiring a hingeable connection and are held in a fixed position by means of the plurality of fasteners.

### BRIEF DESCRIPTION OF THE DRAWINGS

[0012] These and other features and advantages of the present invention will be better understood by reading the following detailed description, taken together with the drawings wherein:

[0013] FIGS. 1 through 4 illustrate various operational modes of the fabric hinge according to one feature of the present invention;

[0014] FIGS. 5 through 7 are a top, bottom and cross-sectional side view respectively illustrating the fabric hinge according to the present invention;

[0015] FIGS. 8A and 8B are exploded views of the fabric hinge according to the present invention configured for being mounted in a piece of bamboo material; and

[0016] FIGS. 9, 10 and 11 are bottom, plan and side views respectively of the fabric hinge according to the present invention configured for being mounted in a piece of bamboo or other similar material.

### DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0017] The present invention includes, in one embodiment, a foldable hinge wherein the hinge portion is made of a fabric material or member. The foldable hinge 42, FIGS. 1-4 provides a flush mounted hinge element. As shown in cross-sectional side view in FIG. 7 and as will be explained in greater detail below, the actual hinge portion 44 is made out of fabric or fabric-like material.

[0018] Exploded views of the foldable fabric hinge 42 are shown in greater detail in FIGS. 8A and 8B. Each hinge includes first and second fabric portion holders 45a, 45b. Each of the first and second fabric portion holders 45a, 45b comprises top pieces 46a and 46b and bottom pieces 48a and 48b. The hinge 42 further comprises a high strength fabric hinge portion 50.